

MV-DP3300-01P

3D Laser Profile Sensor



Introduction

With built-in high-accuracy algorithm, image process algorithm of wide dynamic range and data integration algorithm, MV-DP3300-01P can output high accurate 3D point cloud data in real time by combining high frame rate chip and accurate laser control. With compact structure, high integration and easy operation, it is widely applied into 3C industry, electronic manufacturing, automobile industry, etc.

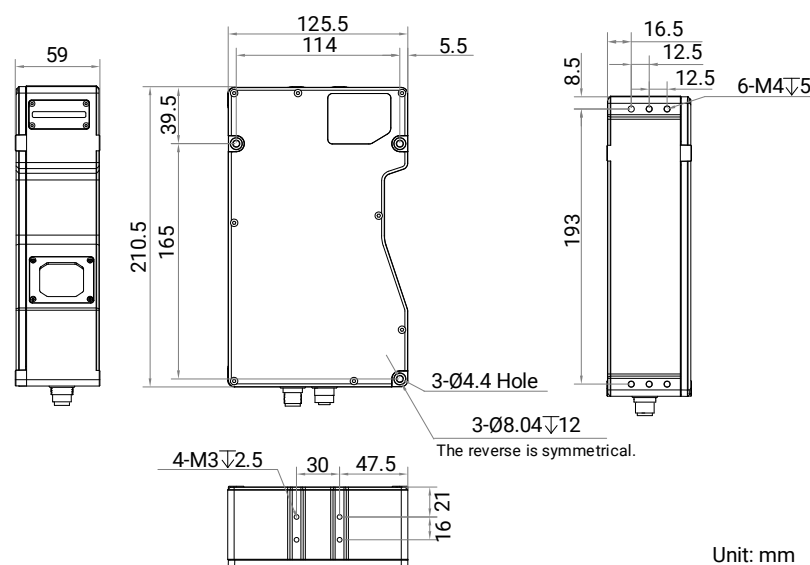
Available Model

MV-DP3300-01P

Applicable Industry

3C industry, electronics, automobile industry, etc.

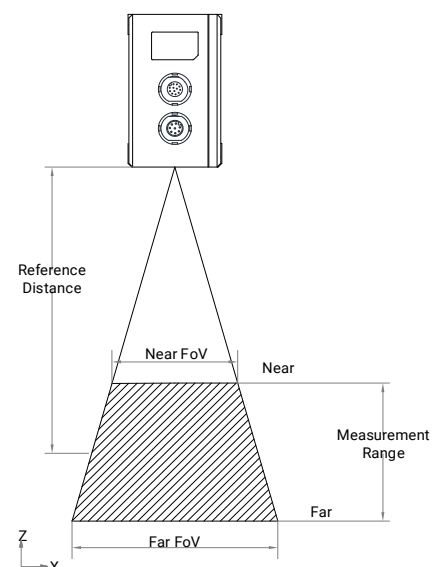
Dimension



Key Feature

- Built-in high-accuracy algorithm and accuracy is up to submicron level.
- Adopts high frame rate chip with 19 KHz scan frequency.
- Supports multiple exposure modes with good robustness.
- Adopts multiple-frame integration technology to provide complete contours.
- Provides multiple filter modes with stable data.
- Supports ROI selection and auto setting for easier operation.

Measurement Range Diagram



Specification

Model	MV-DP3300-01P
Parameter	3D Laser Profile Sensor
Performance	
Data points/profile	3200
Reference distance	300 mm
Measurement range (Z-axis)	210 mm
Measurement range (X-axis)	122 mm @ near field of view 171 mm @ reference distance 220 mm @ far field of view
Resolution (Z-axis)	8.11 μm to 26.50 μm
Repeatability (Z-axis)*	2.03 μm @ data that sensor tests gauge block on optical platform
Linearity Z-axis (±% of MR)	0.01
Profile data interval	37.4 μm to 73.1 μm
Scan frame rate	1.3 kHz (within max. measurement range), max. 19 kHz (in ROI mode)
Data output	Depth image, profile data, brightness image
Trigger mode	Software trigger, hardware trigger (differential encoder)
Laser safety class	Class 3R
Wavelength	405 nm
Electrical features	
Data interface	Gigabit Ethernet (1000 Mbit/s), compatible with Fast Ethernet (100 Mbit/s)
Digital I/O	12-pin M12 interface provides power and I/O, including differential input × 3 (Line 0/3/6), differential output × 1 (Line 1), and RS-232 × 1
Power supply	24 VDC
Power consumption	Typ. 13.8 W @ 24 VDC
Mechanical	
Dimension	210.5 mm × 125.5 mm × 59 mm (8.3" × 4.9" × 2.3")
Weight	Approx. 1550 g (3.4 lb.)
Ingress protection	IP67
Temperature	Working temperature: 0 °C to 45 °C (32 °F to 113 °F) Storage temperature: −30 °C to 80 °C (−22 °F to 176 °F)
Humidity	20% RH to 85% RH (no condensation)
General	
Client software	3DMVS, VM3D, and third-party 3D software
Operating system	32/64-bit Windows 7/10/11 (8 GB memory and i5 CPU recommended)

*This data is obtained via testing gauge blocks in a laboratory, and it is an average from 4096 tests.